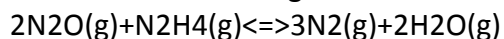


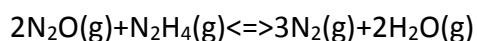
Question #66091, Chemistry / General Chemistry

Consider the following reaction:



Initially there are 0.10 moles of N_2O and 0.25 mol of N_2H_4 in a 10.0 L container. If there are 0.06 mol of N_2O at equilibrium, how many moles of N_2 are present at equilibrium?

Answer :



Make the table

	N_2O	N_2H_4	N_2	H_2O
Initial moles	0.1	0.25	0	0
Change in moles				
Final moles	0.06			

According to chemical equation:

$$n(\text{N}_2) = 3/2n(\text{N}_2\text{O})$$

Fill the table:

	N_2O	N_2H_4	N_2	H_2O
Initial moles	0.1	0.25	0	0
Change in moles	$0.1 - 0.06$ $= 0.04$		$\frac{3 \times 0.04}{2} = 0.06$	
Final moles	0.06		$0 + 0.06$ $= 0.06$	

The answer is **0.06 moles of N_2 are present at equilibrium**